Health Effects of Secondhand Smoke

Secondhand smoke, or environmental tobacco smoke (ETS), is a mixture of side stream smoke and exhaled smoke in the air. Exposure to secondhand smoke is one of the leading causes of preventable death.

Each year in the United States, an estimated 50,000 deaths are attributable to secondhand smoke breathed by nonsmokers. Of these deaths, 3,000 are due to lung cancer each year with an estimated 800 from exposure at home and 2,200 from exposure in work or social settings. Each year, approximately 1,240 adult nonsmokers in Indiana die from exposure to secondhand smoke. Secondhand smoke costs Indiana approximately $390.3 million dollars in excess medical expenses, or about $62 dollars per person each year.

Secondhand smoke is classified as a Group A carcinogen (cancer causing agent) under the Environmental Protection Agency's (EPA) carcinogen assessment guidelines. It contains over 4,000 compounds, more than 50 carcinogens and other irritants and toxins.

Secondhand smoke has been shown to cause heart disease, cancer, respiratory problems and eye and nasal irritation. Exposure to secondhand smoke takes place in the home, public places, worksites and vehicles.

Some Toxins Found in Secondhand Smoke

Ammonia
Formaldehyde
Carbon monoxide
Nicotine
Toluene
Hydrogen cyanide
Arsenic
Benzene
DDT/Dieldrin
Vinyl chloride
Methane
Cadmium
Polonium-210

Major Health Effects of Secondhand Smoke Exposure in Children

Sudden Infant Death Syndrome	Secondhand smoke causes irritation of the airways; maternal smoking is a risk factor for SIDS and lower birth weight.
Acute and Chronic Respiratory Illnesses	Secondhand smoke particles get into the airways and alveoli; can increase severity with irritation of the lungs; greatest impact occurs during first year of life.
Asthma	Smoking during pregnancy may affect lung growth; secondhand smoke increases risk of lower respiratory infection.
Middle ear disease	Secondhand smoke exposure strongly linked with ear infections.

Health Effects of Secondhand Smoke

Effects of Secondhand Smoke on Children

- Children are affected more by secondhand smoke than adults because their bodies are still developing and secondhand smoke can hinder the growth and function of their lungs.
- Hundreds of thousands of lung and bronchial infections are caused by secondhand smoke each year.
- Children and infants exposed to secondhand smoke in the home have dramatically higher levels of respiratory symptoms, respiratory tract infections, and slower lung development.
- Secondhand smoke exposure increases the number of new asthma cases and worsens asthmatic symptoms.
- Every day more than 15 million children in the U.S. (420,000 in Indiana) are exposed to secondhand smoke in the home. Millions of visits to doctors and thousands of hospitalizations occur due to children's exposure to secondhand smoke.

Protecting Hoosiers from Secondhand Smoke

Smoke free environments are the most effective method to fighting exposure to secondhand smoke. CDC's Healthy People 2010 objectives address this issue by stressing the importance of protection for nonsmokers through policies requiring smoke free schools, worksites and public places.

The number of local smoke free air policies is growing in Indiana. Many communities are educating the public of the dangers of secondhand smoke and the need for smoke free air policy. For more information about smoke free air polices see ITPC Fact Sheet, *Protecting Hoosiers from Secondhand Smoke*.

SOURCES: U.S. Environmental Protection Agency (1989). Indoor Air Facts: Environmental Tobacco Smoke; CDC; Glantz et al.(1995). Journal of American Medicine, 273, 13: 1047-1053; Glantz S.A. Tobacco Biology and Politics: An Expose of Fraud and Deception. 1999;CDC,"State-specific prevalence of cigarette smoking among adults, and children's and adolescent's exposure to environmental tobacco smoke-United States 1996", MMWR 46(44); National Cancer Institute, National Institute of Health; Zollinger, T., et al. Estimating the Economic Impact of Secondhand Smoke on Indiana in 2007. Bowen Research Center – Indiana University School of Medicine, June 2008.